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## Bird skins from Malawi (formerly Nyasaland) in the Merseyside County Museums, Liverpool

by P. J. Morgan, C. W. Benson and F. M. Benson

Received 5 November 1977

Benson & Benson (1977: 220-222), in notes on collections of bird specimens, in fact skins, from Malawi, give a total of c. 7,500 in the British Museum (Natural History) (BMNH) out of c. 16,000 in the world as a whole. They add that the only other museum in the United Kingdom holding any number of specimens is the University Museum of Zoology, Cambridge (UMZC), which obtained a share of a collection made by C. B. C. Storey in 1907, that is precisely 41 in the BMNH and 31 in the UMZC (Benson & Benson, *Arnoldia, Rhodesia* 7(32), 1975: 3).

As a result of an informal meeting of ornithologists with an African interest at the Merseyside County Museums, Liverpool (LIVCM) on 17 and 18 September 1977 ('The African Chat'), attended by all three of us, it became apparent that there was a very appreciable representation of material from Malawi in this museum, emanating from A. Whyte and Sir Alfred Sharpe. The Whyte material was included in Canon H. B. Tristram's first collection, purchased in 1896, while the Sharpe material was presented by Sir Alfred himself in 1903.

Whyte collected in Malawi in 1891-1897, under the patronage of Sir Harry Johnston, the first administrator of the territory (see also R. B. Sharpe 1906: 404, 511). His collections were reported on by G. E. Shelley in a series of papers (*Ibis*, 1893-1898). All the specimens traced in the LIVCM were collected in 1892-1893, at well known localities in southern Malawi, the majority at Zomba. They were obviously examined by Shelley, since they bear identifications in his handwriting, apart from a few in an unknown hand. Clearly they were too late for inclusion in Tristram's printed catalogue (1889). However, Tristram continued to maintain manuscript catalogues, four out of five of which are in the LIVCM. These have been analysed to produce a donor/collector index, cross-references to specimens, specimen numbers and collection dates. The records under Whyte's name reveal a total of 104 specimens, all bearing Tristram labels and numbers. In fact there are at least a further 152 specimens. These bear only original labels in Whyte's handwriting, and labels printed with Sir Harry Johnston's name endorsed with Shelley's determination. They must have been kept as 'duplicates' by Tristram, not for incorporation into his collection, although they were included in the sale to the LIVCM some three years after their receipt.

Particularly notable are the following specimens, all apparently adult, which, although not actually type material (in the BMNH, cf. Warren 1966, Warren & Harrison 1971), were collected at about the same time:—

*Aplopelia larvata johnstoni* Shelley (*Ibis*, 1893: 28), now considered a synonym of *A. l. larvata*: one, undated, Milanji (Mulanje).

*Lybius torquatus zombae* (Shelley, *Ibis*, 1893: 10): one, Nov. 1892, Zomba.

*Buccanodon whytii whytii* (Shelley, *Ibis*, 1893: 11): one, Nov. 1892, Zomba.

*Andropadus tephrolaema fusciceps* (Shelley, *Ibis*, 1893: 13): one, Sept. 1892, Milanji (Mulanje).

*Phyllastrephus cerviniventris* Shelley (*Ibis*, 1894: 10): two, July 1892, one, Aug. 1892, Zomba. The July specimens appear to be the first ever collected, although not mentioned by Shelley in his description.

*Pogonocichla stellata johnstoni* Shelley (*Ibis*, 1893: 18), now considered a synonym of *P. s. orientalis*: one, Sept. 1892, Milanji (Mulanje).

*Anthreptes longuemarei nyassae* Neumann (*Orn. Monatsber.* 14, 1906: 7): one, 6 Jan. 1893, Zomba. Male in full metallic breeding dress. The distinctiveness of this form was overlooked by Shelley (*Ibis*, 1893: 17; 1894: 14; 1898: 379). The holotype was collected as late as 27 July 1897.

One specimen of *Sylvietta whytii whytii* Shelley (*Ibis*, 1894: 13) is listed by Tristram as collected in August 1892. It would appear to be a syntype, but unfortunately has not been located. It seems that, in addition to the *Phylloscopus* spp. and Zosteropidae lost in the bombing of the museum in 1941 (Wagstaffe in press), the majority of the African Sylviinae were also destroyed. Another Whyte specimen of interest is an apparent male of *Batis soror* (not *molitor*), November 1892, Zomba: wing 58, tail 39 mm, cf. Benson & Benson (1977: 241).

Sir Alfred Sharpe succeeded Sir Harry Johnston (R. B. Sharpe 1906: 476), and collecting continued in his name. It is C.W.B.'s understanding that this was left to barely literate Africans, as is suggested by the handwriting on the original labels, the same as that on some Sharpe specimens in the BMNH. Shelley continued his series of reports, the final one being in *Ibis*, 1901: 586-595, dealing with specimens collected from October 1900 to

January 1901. The 159 in the LIVCM bear months and years of collecting, April 1901 to February 1902, and Shelley's determinations, although it seems that he did not consider that publication of a further report was warranted. Collecting localities (with the suffix 'B.C.A.', British Central Africa, the name Nyasaland not being officially recognised until 1907) are:—Buwa (Bua River), Chanda, Chilasulo (Chiradzulu), Chilwa, Malosa, Matiya, Mpimbe, Namiwawa, Palombe (Phalombe), S(outh) Angoniland, Ulumba, Zomba. All these names are in the gazetteer of localities in Benson & Benson (1977), except Matiya and Ulumba, whose locus is uncertain. The remainder are all in southern or central Malawi, the most northerly being the Bua River. Worth mention are a specimen of *Anthus vaalensis* from South Angoniland, September 1901, and one of *A. leucophrys* therefrom, August 1901. There is also a series of seven specimens, from Chiradzulu, Chanda, South Angoniland and marked 'Lamprocolius sycobius' (= *Lamprotornis chalybaeus sycobius*), but in fact the smaller *L. chloropterus elizabeth*, since they have a wing range of 111–120 mm only.

A perusal of the catalogue of Forbes & Robinson (1898–1901), covering only non-passerines, indicates the inclusion of a number of Whyte's specimens, although his name is not mentioned. The dates and localities—Zomba, Upper Shire, Tshiromo (Chiromo), Milanji (Mulanje), Lake Shirwa (Chilwa)—tally accordingly. Sharpe's material does not appear in the museum register until February 1903, and was too late for inclusion. However (pp. 35 *et seq.*), Forbes & Robinson mention a locality 'Central Africa (Kikombo)'. Prior to 1901 Sharpe did receive specimens from 'Kikomba (Ikomba)' (sic), in present day northeastern Zambia at 9° 09' S, 32° 15' E (Benson, *Bull. Brit. Orn. Cl.* 67, 1946: 37; Benson & Benson 1977: 233). This is not to be confused with Kikombo, in central Tanzania at 6° 15' S, 36° 00' E, c. 40 km east-southeast of Dodoma (*Times Atlas of the world*, 1975). In the LIVCM there is a collection from Kikombo made by Dr. S. T. Pruen in 1888, received through Canon Tristram in 1896. Many of these specimens are listed by Tristram (1889, including Addenda). One of them in particular is remotely unlikely to ever occur in northeastern Zambia (nor indeed Malawi), *Cosmopsarus unicolor*, listed on p. 253. The misunderstandings which can arise over African collecting localities is alluded to by Benson & Benson (1977: 223–224). One further instance is the type-locality 'Myombe, northern Nyasaland' for *Serinus madarszi* (cf. Peters's *Checklist of Birds of the World* 14, 1968: 220), which should read 'Muyombe, north-eastern Zambia', Muyombe being at 10° 40' S, 33° 30' E (Benson *et al.*, *Birds of Zambia*, 1971: 381).

To conclude, while Benson & Benson (1977: 220) were aware that some 600 specimens from these early Malawi collections were transferred to the South Africa Museum, Cape Town, it was only in September 1977 that this important holding in Liverpool came to their notice. It totals at least 415 specimens (including a precise figure from Sharpe of 159), representing 125 species. Apart from those already mentioned, certain common species are well represented, mostly by Whyte material, thus:—*Turdoides jardineii*, 18 specimens; *Turdus libonyanus* and *Tchagra senegala*, 23 each; *Euplectes capensis*, 20. In the case of the last, all from Whyte, some specimens have surely been misdated. There are six males in breeding dress dated July or August, but this dress is only known to be worn from about December to May (Benson & Benson 1977: 194).



Sincere thanks are due to Michael Brennan, of the Merseyside County Museums, who produced the index of the Tristram collection, while employed under the Manpower Services Commission Job Creation Programme.

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## The Basisphenoid notch of Kingfishers

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Received 25 November 1977

The basisphenoid rostrum is a structure of vital importance in a bird's skull. From the base of the cranium, this bony bar runs forward along the midline, forming the ventral edge of the interorbital septum. It plays a crucial part in cranial kinesis (the process by which the upper jaw is raised or lowered relative to the cranium), providing a firm bony rail on which the palatines and pterygoids may slide backwards or forwards. A full discussion of this mechanism is provided by Bock (1964). This short paper draws attention to an unusual modification of the basisphenoid rostrum in kingfishers (Alcedinidae) observed in the course of a study of feeding apparatus structure in the Coraciiformes and Piciformes (Burton, in prep.). Though a striking feature of many kingfisher skulls, it seems to have been generally overlooked, even in such studies as those of Shufeldt (1884) and Verheyen (1955). Because the rostrum plays so fundamental a part in kinesis, the presence of this modification immediately raises the question of whether some equally unusual kinetic mechanism is involved. This question, and other possible functional interpretations, are considered in the discussion.

#### Description

This feature was first noticed in skulls of *Ceryle* and *Chloroceryle* spp. (Alcedinidae: Cerylinae), and has subsequently been found in various other Alcedinidae. Possible functional equivalents in birds of other orders will be considered in the discussion.